

Docket No.: ACY33317-D1  
Patent

### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims

Claim 14-18 (Canceled)

Claim 19 (Previously presented) An antigenic conjugate comprising a carrier protein covalently bonded to the conserved portion of a lipopolysaccharide (LPS) of a gram negative bacterium selected from the group consisting of *Neisseria gonorrhoeae*, *Haemophilus influenzae*, non-typable *Haemophilus influenzae*, *Haemophilus ducreyi*, *Helicobacter pylori*, *Escherichia coli*, *Chlamydia*, *Salmonella*, *Salmonella typhimurium*, *Salmonella Minnesota*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Moraxella catarrhalis*, *Bordetella pertussis*, *Shigella*, *Klebsiella* and *Vibrio cholera*, wherein the conserved portion of the LPS comprises GlcNAc-Hep2-phosphoethanolamine-KDO<sub>2</sub>-LipidA, wherein the conjugate elicits a cross protective immune response against heterologous strains of gram negative bacteria.

Claim 20 (Previously presented) The antigenic conjugate of claim 19, wherein the LPS is de-O-acylated.

Claim 21 (Currently Amended) The antigenic conjugate of claim 19, wherein the carrier protein is selected from the group consisting of tetanus toxin or toxoid, diphtheria toxin or toxoid, mutant of diphtheria toxin CRM<sub>197</sub>, pseudomonas exotoxin A, cholera toxin or toxoid, Group A streptococcal toxins, pneumolysin of *Streptococcus pneumoniae*, filamentous haemagglutinin (FHA), FHA fragments of *Bordetella pertussis*; pili or pilins of *Neisseria gonorrhoeae*, pili or pilins of *Neisseria meningitidis*; outer membrane proteins of *Neisseria meningitidis*, outer membrane proteins of *Neisseria gonorrhoeae*, C5A peptidase of *Streptococcus* and surface protein of *Moraxella catarrhalis*.

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Patent**Listing of Claims (Continued)**

Claim 22 (Previously presented) The antigenic conjugate of claim 19, wherein the carrier protein is linked to the conserved portion of the LPS with a compound selected from the group consisting of Sulfosuccinimidyl-6-(3-[2-pyridyldithio]propionamido)-hexanoate (Sulfo-LC-SPDP); succinimidyl-6-(3-[2-pyridyldithio]propionamido)-hexanoate (LC-SPDP); Traut's reagent (2-iminothiolane); N-succinimyl-S-acetyl thioacetate (SATA); N-Succinimidyl-3-(2-pyridyl dithio)propionate (SPDP), succinimidyl acetyl thiopropionate SATP, succinimidyl-4-(N-maleimido methyl)cyclohexane-1-carboxylate (SMCC), maleimido benzoyl-N-hydroxy succinimide ester (MBS), N-succinimidyl (4-iodoacetyl)aminobenzoate (SIAB), succinimidyl 4-(p-maleimidophenyl)butyrate (SMPB), bromoacetic acid-N-hydroxy succinimide (BANS) ester, 1-ethyl-3-(3-dimethylamino propyl) carbodiimide (EDAC), adipic acid dihydrazide (ADH), cystamine and dithiobis(succinimidyl propionate) (DTSSP).

Claim 23 (Previously presented) An immunogenic composition comprising an effective amount of the antigenic composition of claim 19.